Floor Space Charges (Para. 22(f))

BellSouth Property Management provided the actual book cost of the land and buildings for each central office in which interconnectors expressed an interest. The costs associated with the investment in land and buildings (excluding the collocation preparation charges) that are used to provide expanded interconnection service were calculated.

Market value was not estimated. BellSouth is not leasing real estate in its expanded interconnection offering. As required by the Commission, it is providing an interconnection service that requires that it use its central office space. Market Value is defined as the most probable price in terms of money that a property would bring if exposed for sale in the open market in an arm's length transaction between a willing seller and a willing buyer, both of whom are knowledgeable concerning all the uses to which it is adapted and for which it is capable of being used. Market Rent is determined by a comparative study of rents charged for similar property. It is the opinion of BellSouth that there exists no similar leased properties which are comparable to central offices. There is no existing market from which to determine a value. Cost is therefore a reasonable method by which value can be established.

The Designation Order requests that LECs that use a sample to calculate floor space costs explain their procedures and how the costs were averaged. For BellSouth Floor Space costs are recovered through the "Interconnection-100 Square Foot Module" rate element. The central office land and building investments were obtained from a subset of BellSouth central offices. The subset represents the central offices for which BellSouth had bona fide requests for physical collocation (as of January 15, 1993) and for which space was available. Of the 141 central offices for which BellSouth had received bona fide requests for physical collocation, 90 offices had space available (See Appendix B). Land and building investment and assignable square feet for each of these ninety offices was summed.[1] Total land and building investment was divided by total space feet to develop the average land and building investment per square foot. The other direct costs for the floor space rate element, DC Power cable structures, are not central office specific and were developed on a region wide basis. As discussed in Exhibit 2, maintenance and administrative factors were used to develop the fully assigned cost.

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[1] In obtaining the data for the ninety offices, data for the Lafitte central office was inadvertently substituted for the Lafayette central office.

Power Charges (Para. 22(g)(1))

The Designation Order requests that all LECs provide the equations used to compute the costs of AC power that is included in the cost of DC power. BellSouth did not include any AC power costs in the DC power cost. The costs of AC power are included in the building space cost.

The Designation Order also requests an explanation regarding the reason for including the costs of both electronic digital power and electronic analog power in developing the costs for Interconnection Floor Space rate element. The power plants in the central offices for which collocation was requested are either electronic digital or electronic analog (depending generally on switch type of that central office). In developing an average cost, BellSouth assumed an equal split of collocation arrangements in central offices having each type of power plant. Accordingly, the Interconnection Floor Space rate element does not include the cost for electronic digital power and electronic analog power but rather an average cost for power which recognizes the different types of power plant that will be used.

Cross-Connection and Termination Equipment (Para. 22(h))

The Designation Order requests certain information regarding the cross-connection portion of expanded interconnection service. In developing cross-connection charges BellSouth assumed that 10 percent of the cross-connection arrangements would require repeaters.

Network considerations and the potential for interference and crosstalk require that pulse characteristics be precisely controlled at the DSX cross-connect as defined in the ANSI T1.102-1987 specification. In order to meet these industry standards for wave form, power levels, and pulse balance for a digital signal at the DSX, the cable between the EIS customers' equipment and the cross-connect frame must not exceed a specific distance. This cable limit is 655 feet for a DS1 signal and 450 feet for a DS3 signal. If the cable limits are exceeded, an intermediate signal regenerator, or repeater, must be used to insure that the signal meets the required specifications. BellSouth has a number of central office buildings that are large enough that the cabling installed between the EIS space and the cross-connect frame may exceed the cabling limits. As explained in BellSouth Telecommunications' Expanded Interconnection Service DS1 and DS3 Level Network Interface Specification Technical Reference (TR 73572, paragraphs 3.2.6.1 and 4.2.5.1), if the cable limits are exceeded, BellSouth will provide repeaters.

BellSouth used a distributed collocation configuration to develop cost estimates for our EIS and VEIS tariffs. This configuration was used because it was expected that sufficient adjoining space in every central office could not be found so that all EIS/VEIS customers could be located in the same area. If the customers are distributed, the configuration is logically distributed. While there may be some theoretical cost benefit associated with a centralized configuration where some structural components can be shared, without knowing exactly where and when each EIS/VEIS customer will order service in advance, no cost advantage can be attributed to any configuration. BellSouth made every effort to minimize the quantity and cost of interconnection components. BellSouth's architecture for EIS/VEIS is simple and there are no apparent engineering benefits or drawbacks to a centralized configuration versus a distributed configuration. With regard to BellSouth's use of the point-of-termination (POT) bay as a point of demarcation, there are sound design and engineering reasons for this equipment. In the Report and Order and Notice of Proposed Rulemaking released by the FCC on October 19, 1992, paragraph 157 stated in part:

> We [FCC] will require that the LECs provide the following expanded interconnection elements pursuant to generally available tariffs at study-area-wide averaged rates under both physical and virtual collocation: (1) the cross-connect element, which covers the short cable connection from the LEC distribution frame to the central office electronic equipment owned by or dedicated to the interconnector; and (2) any

> contribution charge that may be permitted in the future.[2]

In accordance with this paragraph, BellSouth Expanded Interconnection Service tariff included DS1 and DS3 Cross-Connect elements consisting of the cable connection between the collocation space and the central office distributing frame (DSX Frame) as well as cross-connect panels on the DSX frame, interface panels, cable rack, bay framework and other supporting hardware. As it applies to BellSouth, the Point of Termination bay is part of the cross-connect rate element. It would include a relay rack or bay assembly and one or more interface panels. These panels provide the interface between the customer's cable and equipment and the BellSouth provided cable. The interface panels are basic bulkhead type terminal blocks with wire wrap pins or BNC connectors, for DS-1 or DS-3 interconnections, respectively, that extend through both sides of the panel.

These panels are the lowest cost equipment of this type and are referred to as cross-aisle panels, interface panels, or bulkhead connectors by various manufacturers. Typical panels to be used by BellSouth for this application include ADC Telecommunications DS1 an DS3 Interface Panels and AT&T's DSAB1 and DSAB3/1 Access Panels.

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[2] Expanded Interconnection with Local Telephone Company Facilities, 7 FCC Rcd 7369 (1992).

The interface panels serve the following functions:

a) to provide a termination point for the DS1 and/or DS3 cable facilities,

b) to provide a clearly defined demarcation point between BellSouth facilities and the collocator's facilities so that the collocator can have access to and complete control of its services,

c) to provide discrete terminations accessible by the collocator that allow circuit identification for initial DS1/DS3 service provisioning and ongoing maintenance,

d) to provide a labeling and identification for the DS1 and/or DS3 cable facilities.

If the interface panels and associated "Point of Termination Bay" were eliminated, BellSouth would still have to terminate its DS1 and DS3 cables somewhere or develop a method to tag and identify those cables within the collocation space. Since no method has been identified, we cannot estimate the cost associated with this approach. However, the engineering and labor cost of terminating the cables on a collocator provided facility or terminal block would not be appreciably different from terminating them on a BellSouth interface panel.

The POT Bay cost[3] is found in the Cross Connection Rate Elements. The costs are as follows:

	Monthly Cost Cross Connect*	Monthly Cost Pot Bay
DS1	8.79	$ .48
DS3	75.93	$3.10

* includes POT Bay cost

Source: BellSouth Transmittal No. 92, Appendix A Workpapers 2A and 2B

The Designation Order also requests BellSouth to explain its utilization factor for DS1/DS3 cross-connects. The DS1 and DS3 cross-connect equipment will not have a 100% utilization. The equipment will be used by various interconnectors simultaneously, therefore growth capacity as well as maintenance capacity is required. The 0.85 utilization is BellSouth's estimate of the objective utilization of DS1 and DS3 cross-connect equipment. This factor is typical for similar DS1 and DS3 cross-connect equipment used in other DS1 and DS3 offerings. There is no reason to believe that interconnection DS1 and DS3 cross-connects would be any different.

The IFCPC labor costs are costs associated with the engineering and installation of the DS1 and DS3 equipment and is capital labor, i.e., included in Part 32 Account 2232. Each time an additional 28 DS1 or 12 DS3 cross-

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[3] The POT Bay cost is shown on the Partioned Rate Element List in Exhibit 1 as the Termination Equipment function.

connect capacity is installed, this labor cost is incurred. Therefore, the IFCPC labor cost is part of the installed investment for each 28 DS1 and 12 DS3 cross-connect capacity. Utilization is always applied to the total installed (capitalized) investment for equipment. Therefore, the 0.85 is applied to the IFCPC capitalized labor cost.

Security Arrangements

Where practicable, BellSouth will provide secured access to collocation areas through the addition of walls, doors, hallways, etc. In offices where it is not feasible to separate collocation space from other areas housing BellSouth's network, a security escort will be required. BellSouth believes such offices will constitute a small number of the COs where collocation is offered. Moveover, in the provisioning of security escorts, BellSouth will be as responsive as possible to collocator needs.

Collocators working in common operational areas (e.g., vaults, manholes, risers) will be escorted by a trained network technician. Collocators need not be accompanied for inspections of interconnector facilities/equipment in a common operational area or for visits to a common vending/rest area.

These measures are considered the minimum necessary to protect BellSouth network operations and to safeguard employees and property. They are analogous to rules governing access by BellSouth vendors and constitute no undue interference with the functioning of an expanded interconnection arrangement.

APPENDIX A

EXHIBIT 4
Appendix A

The following in an example of the shortfall, under recovery of costs, that would incur if a price was set as a nonrecurring charge equal to the investment.

ASSUMPTIONS:

A	INITIAL INVESTMENT	$1,000
B	NONRECURRING CHARGE	$1,000
C	INVESTMENT LIFE	10 YEARS
D	TAX DEPRECIATION	ACRS TAX SCHEDULE
E	STATE AND LOCAL INCOME TAX RATE	0.4
F	COST OF MONEY	0.1334

CASH FLOW ANALYSIS

LINE	ITEM	SOURCE	AMOUNT					
1	YEAR		1	2	3	4	5	6
2	REVENUE		$1,000	$0	$0	$0	$0	$0
3	INITIAL INVESTMENT		$1,000					
4	ACRS TAX RATES		0.2	0.32	0.192	0.1152	0.1152	0.0576

THE ACCELERATED COST RECOVERY SYSTEM (ACRS) TAX SCHEDULE IS A PUBLISHED INCOME TAX SCHEDULE.
THE INVESTMENT IN THIS EXAMPLE IS ASSUMED TO HAVE A 5 YEAR TAX LIFE AND THE APPROPRIATE TAX SCHEDULE RATES ARE INDICATED ON LINE 4.

5	TAX DEP. EXP.	L3 * L4	$200.00	$320.00	$192.00	$115.20	$115.20	$57.60
6	NPV TAX DEP. EXP.		$716.01					

THE NET PRESENT VALUE OF THE TAX DEPRECIATION EXPENSE IS THE CURRENT VALUE OF THE FUTURE 6 YEARS OF TAX DEPRECIATION EXPENSE.

7	TAXABLE INCOME	L2 – L6	$283.99

THE TAX DEPRECIATION EXPENSE IS TAX DEDUCTIBLE, THEREFORE THE TAXABLE INCOME IS THE REVENUE $1000 LESS THE DEDUCTIONS $716.01 (LINE 2 – LINE 6).

8	INCOME TAX	L7 * E	$113.59

SINCE THE $1000 IS AN INVESTMENT AND THERE ARE EARNINGS ASSOCIATED WITH THIS INVESTMENT INCOME TAX IS DUE.

9	RECOVERY	L2 – L8	$886.41

THE RECOVERY IS THE REVENUES LESS THE EXPENSES. THE EXPENSE IN THIS CASE IS THE INCOME TAX.

10	SHORTFALL	L2 – L9	$113.59

THE SHORTFALL IS EQUAL TO THE INCOME TAX WHICH MUST BE PAID ON THE INVESTMENT. BECAUSE THE TAX DEPRECIATION EXPENSE MUST BE SPREAD OVER A TAX LIFE OF THE INVESTMENT AND REVENUES FOR FUTURE YEARS ARE ZERO, THE NONRECURRING CHARGE MUST BE SET HIGH ENOUGH TO RECOVER THE INCOME TAX.

11	FACTOR	1.666667	GROSS–UP FACTOR = 1 + (TAX RATE/(1 – TAX RATE))

SINCE THE REVENUES MUST BE SET TO RECOVER THE INCOME TAX, INCOME TAX WILL ALSO HAVE TO BE PAID ON THIS ADDITIONAL INCOME TAX AMOUNT INCLUDED IN THE REVENUES.

12	ADDITIONAL TAX	L8 * L11	$189.32
13	REQUIREMENTS	L3 + L12	$1,189.32

THE REQUIREMENTS FOR FULL COST RECOVERY IS EQUAL TO THE INVESTMENT PLUS THE INCOME TAX OBILGATION INCLUDING THE GROSS UP FOR TAXES.

THE DIFFERENCE IN THE BELLSOUTH EIS SPACE CONSTRUCTION CHARGE – PER 100 SQUARE FOOT MODULE NONRECURRING CHARGE OF $51,660.00 AND THE INITIAL INVESTMENT OF $36,191.74 IS THE INCOME TAX OBLIGATION. THERE IS ALSO THE IMPACT OF ROUNDING.

APPENDIX B

EXHIBIT 4
Appendix B

BELLSOUTH CENTRAL OFFICES INCLUDED IN INVESTMENT CALCULATION

STATE	LOCATION	CLLI
Alabama	Anniston	ANTNALMT
	Birmingham	BRHMALHW
		BRHMALOM
	Florence	FLRNALMA
	Huntsville	HNVIALMT
		HNVIALUN
	Mobile	MOBLALAZ
	Montgomery	MTGMALDA
		MTGMALMT
	Tuscaloosa	TSCLALDH
Florida	Boca Raton	BCRTFL3T
	Cocoa	COCOFLMA
	Daytona Beach	DYBHFLMA
	Ft. Lauderdale	FTLDFLCY
		FTLDFLJA
		FTLDFLMR
		FTLDFLPL
	Ft. Pierce	FTPRFLMA
	Hollywood	HLWDFLWH
	Jacksonville	JCVLFLCL
	Melbourne	MLBRFLMA
	Miami	MIAMFLGR
		MIAMFLHL
		MIAMFLPL
	North Dade	NDADFLBR
	Orlando	ORLDFLPC
	Pensacola	PNSCFLBL
	St. Augustine	STAGFLMA
	West Palm Beach	WPBHFLAN
		WPBHFLRB

STATE	LOCATION	CLLI
Georgia	Albany	ALBYGAMA
	Atlanta	ATLNGAEP
		ATLNGATH
	Augusta	AGSTGAMT
	Columbus	CLMBGAMT
	Dunwoody	DNWDGAMA
	Macon	MACNGAMT
	Roswell	RSWLGAMA
Kentucky	Frankfort	FRFTKYMA
	Louisville	LSVLKYBE
	Louisville South	LSVLKYOA
	Owensboro	OWBOKYMA
	Winchester	WNCHKYMA
Louisiana	Baton Rouge	BTRGLAMA
	Kenner	KNNRLAHN
	LaFayette	LFYTLAVM
	Lafitte	LFTTLAMA
	New Orleans	NWORLAMA
	Shreveport	SHPTLAMA
Mississippi	Gulfport	GLPTMSTS
	Jackson	JCSNMSCP

STATE	LOCATION	CLLI
North Carolina	Asheville	AHVLNCOH
	Burlington	BURLNCDA
	Chapel Hill	CPHLNCRO
	Charlotte	CHRLNCBO
	Greensboro	GNBONCAS
		GNBONCEU
	Laurinburg	LRBGNCMA
	Raleigh	RLGHNCGL
		RLGHNCMO
	Salisbury	SLBRNCMA
	Wilmington	WLMGNCFO
	Winston-Salem	WNSLNCFI
		WNSLNCLE
		WNSLNCVI
South Carolina	Anderson	ARSNSCMA
	Charleston	CHTNSCDT
		CHTNSCNO
	Florence	FLRNSCMA
	Greenville	GNVLSCDT
	Orangeburg	ORBGSCMA
	Spartanburg	SPBGSCMA
Tennessee	Arlington	ARTNTNMT
	Chattanooga	CHTGTNNS
	Collierville	CRVLTNMA
	Jackson	JCSNTNMA
	Knoxville	KNVLTNMA
		KNVLTNWH
	Memphis	MMPHTNCK
		MMPHTNCT
		MMPHTNEL
		MMPHTNFR
		MMPHTNGT
		MMPHTNOA
		MMPHTNWW
	Nashville	NSVLTNAP
		NSVLTNBW
		NSVLTNCH
		NSVLTNDO
		NSVLTNMT

EXHIBIT 5

EXHIBIT 5

Rate Structure

Under BellSouth's tariff, expanded interconnection service (EIS) space preparation and space construction represent different work activities; the costs of which are recovered through separate nonrecurring charge (NRC) rate elements. BellSouth has not established separate rate elements for frames, panels, cabling and racks; because the costs associated with these items are related to provisioning the DS1/DS3 cross-connect rate elements. Separate tariffing in this circumstance would create an unnecessary number of rate elements, confuse the ordering process and introduce further complexity to the task of tariff administration.

The virtual expanded interconnection service (VEIS) rate element for cable installation recovers all nonrecurring costs associated with pulling the collocator's fiber optic entrance cable into the central office (CO), installing riser cable, splicing entrance to riser cable and extending cable to the collocator's dedicated CO transmission equipment. These tasks are performed with each VEIS arrangement; associated costs are therefore properly recovered through one rate element. Use of conduit, entrance and riser cable rack space for the collocator's fiber optic cable is recovered in a separate monthly charge termed cable support structure.

The interconnection module is used exclusively to provision an EIS arrangement. Hence, the floor space rental rate includes all components integral to the service. These elements, recovered through the interconnection space monthly recurring charge, are investment for standard -48 volt DC power with battery back-up, cable access support structures, land and building associated with CO and circuit equipment used to provision DC power and cable support structures, and land and building enclosed by the interconnection module.

The VEIS floor space recurring rate element is tariffed on a per square foot basis, reflecting the fact that floor space allocation for transmission equipment may vary in such arrangements. This rate element recovers investments for the CO land and building occupied by the collocator's equipment and investments required to provide support items (e.g., lighting, overhead racks, auxilliary framing and AC power outlets). The cost associated with DC power requirements was not included in the floor space element, since this will vary with the type of transmission equipment used in a VEIS arrangement.[1] Instead, a separate per ampere rate element was created, which recovers investments per ampere for standard -48 volt DC power, including materials, engineering and installation costs.

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[1] Electric power usage in a VEIS arrangement will be billed on the basis of engineered requirements.

Central Office Construction Charge

EIS construction costs are recovered through a single nonrecurring element identified as the space preparation charge. All elements integral to provisioning the EIS arrangement are included. The space preparation charge is payable in full before construction of the module begins. To avoid double recovery, BellSouth's tariff provides that any collocator vacating an interconnection space will be credited with the unamortized amount of the space construction charge upon occupancy by another collocator. The succeeding collocator will become responsible for the unamortized amount of the charge with payment due before he takes possession of the interconnection space.[2] There is no time limitation to this provision.

The space preparation charge is based upon identified costs for one 100 square foot module. Hence, there is no requirement to segregate common costs or devise a special mechanism for the proration of such costs.

Equipment Cost Recovery

With respect to VEIS arrangements, BellSouth charges an ICB nonrecurring rate for installation of the collocator-designated transmission equipment. This charge represents the one-time costs of equipment installation and is thus appropriately recovered through a nonrecurring element.

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[2] BellSouth Telecommunications, Inc., Tariff F.C.C. No. 1, ¶ 20.15.1(C).

The equipment in a VEIS arrangement is the property of the collocator who pays the nonrecurring charge. Accordingly, this collocator enjoys an unrestricted right of use and/or disposal of such equipment.

Nonrecurring Charges

An application fee covering processing costs must accompany any EIS/VEIS inquiry. Payment of a space preparation charge and a space construction charge is also required prior to the commencement of work to prepare an interconnection space. Similarly, a cable installation charge and an equipment installation charge must be paid before work begins on a VEIS arrangement.

If advance payment of these services were not obtained, BellSouth would be required to divert funds from its own budget for the benefit of collocator facilities. BellSouth should not be required to provide such an extension of credit or otherwise to finance the operations of its competitors.

Electric Power

Power to the interconnection space is supplied directly from the DC power plant. BellSouth selected a 40 Amp fuse capacity, which is believed to be satisfactory for most expanded interconnection arrangements. The other alternatives, 30 amp and 60 amp, did not combine factors of cost and capacity in a manner as advantageous as the 40 amp power increment chosen. Moreover, the difference in cost

EXHIBIT 6

EXHIBIT 6

Space Size

Interconnection floor space is offered in 100 square foot modules. This approach is deemed the most cost effective and efficient way to provide CO space, having both administrative and operational advantages.

Space size is predicated upon an initial collocator arrangement consisting of a fiber optics terminal bay, a digital cross connect system and the point of termination bay. These facilities will require between 30 and 45 feet of the interconnection space. Additional square footage is needed to provide door clearance and to accommodate a table or other work surface. Thus, BellSouth anticipates that a minimum of 50 to 70 square feet would be employed in any collocation arrangement, with remaining space available to house additional items (equipment bays, test equipment, spare parts, shelves/cabinets, manuals, equipment service records, etc.).

The use of standardized modules facilitates the design of the collocation arrangements. In particular it enhances BellSouth's ability to pre-plan for the construction of secure halls and entrances which will segregate CO equipment from the collocation area and minimize the need for security escorts or other extraordinary measures. BellSouth maintains that this standardization is reasonably applied to both initial and subsequent requests for interconnection

space. To provide customized interconnection space according to individual specifications will substantially increase design and construction costs for the EIS arrangement and will add to the total cost of provisioning collocation in that office. Moreover, by creating more unusable space, especially the resultant needless expansion of common hallways and entrance ways, such a policy would reduce the number of collocators who could otherwise be accommodated within a CO and increase BellSouth's cost of provisioning subsequent arrangements.

Expansion and Ordering

BellSouth's ordering provisions will allow customers to order new expanded interconnection service (EIS) or virtual expanded interconnection service (VEIS), as well as amend existing orders in progress. The application fee nonrecurring charge (NRC) applies per request, per CO for each new EIS/VEIS service request. No application fee is required for amendments or supplements to service orders in progress. A subsequent request by the same customer in the same CO would be treated as "new" if the initial EIS/VEIS order had completed and was in service. In such cases BellSouth must undertake the same preparation activities and incur the same costs applicable to initial service arrangements. In Exhibit 2 BellSouth discusses the work centers and work operations for nonrecurring charges in its response to paragraph 22(b)(3) of the Designation Order.

A copy of the application form used to process requests for expanded interconnection service is attached to this Exhibit 6 as Appendix A.

Space Allocation

Subject to space availability, BellSouth will process applications for expanded interconnection arrangements on a first-come, first-served basis. Whenever possible, BellSouth will assign contiguous spaces to a collocator requesting more than one interconnection space within the same CO. It may be anticipated, however, that space limitations or other characteristics of the CO will at times preclude the assignment of contiguous spaces.

Collocators occupying more than one 100 square foot module in the same CO will be permitted to connect, at the collocator's expense, transmission equipment within each such module assigned to that collocator only. In these cases the collocator will be responsible for supply and installation of the cabling between modules using Company-designated supporting structures and Company-approved technicians.

BellSouth's interconnection policy will enable each collocator to maximize efficiency and realize the full benefit of its arrangements. The requirement that each collocator furnish its own cable between interconnected spaces insures compatibility with those CO entrance